

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A display device comprising:

a display including a source signal line driver circuit and a gate signal line driver circuit;

a display controller;

a first means for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second means not for dividing one frame period into a plurality of subframe periods, for setting one of lighting and non-lighting to the one frame period, and for expressing 1-bit gradation in accordance with a total lighting time during the one frame period and for having a longer frame period as compared to the one frame period for expressing n-bits gradation,

wherein the display and the display controller are formed over a common substrate,

wherein the second means has a lower voltage for driving the source signal line driver circuit and the gate signal line driver circuit than the first means, and

wherein the first and second means are controlled by the display controller.

2. (Currently Amended) A display device comprising:

a display including a source signal line driver circuit and a gate signal line driver circuit;

a display controller;

a first means for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for

expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second means not for dividing one frame period into a plurality of subframe periods, for setting one of lighting and non-lighting to the one frame period, and for expressing 1-bit gradation in accordance with a total lighting time during the one frame period, ~~for having a longer frame period as compared to the one frame period for expressing n-bits gradation and for operating the display with a lower clock frequency than the first means,~~

wherein the display and the display controller are formed over a common substrate,

wherein the second means has a longer frame period as compared to the one frame period for expressing n-bits gradation,

wherein the second means has a lower voltage for driving the source signal line driver circuit and the gate signal line driver circuit than the first means, and

wherein the first and second means are controlled by the display controller.

3. (Original) A display device according to claim 1,

wherein the display device further comprises a frame memory;

n-bits data (n is a natural number of two or more) is written and read out to perform a display operation in the first means; and

1-bit data is written and read out to perform a display operation in the second means.

4. (Original) A display device according to claim 2,

wherein the display device further comprises a frame memory;

n-bits data (n is a natural number of two or more) is written and read out to perform a display operation in the first means; and

1-bit data is written and read out to perform a display operation in the second means.

5. (Original) A display device according to claim 1,

wherein the display device further comprises a light emitting element for each pixel;

a specific voltage is applied to the light emitting element; and
a voltage applied to the light emitting element in the first means is higher than a voltage
applied to the light emitting element in the second means.

6. (Original) A display device according to claim 2,
wherein the display device further comprises a light emitting element for each pixel;
a specific voltage is applied to the light emitting element; and
a voltage applied to the light emitting element in the first means is higher than a voltage
applied to the light emitting element in the second means.

7. (Original) A display device according to claim 1,
wherein the display device further comprises a light emitting element for each pixel;
a specific current is supplied to the light emitting element; and
a current supplied to the light emitting element in the first means is larger than a current
supplied to the light emitting element in the second means.

8. (Original) A display device according to claim 2,
wherein the display device further comprises a light emitting element for each pixel;
a specific current is supplied to the light emitting element; and
a current supplied to the light emitting element in the first means is larger than a current
supplied to the light emitting element in the second means.

9. (Original) A display device according to claim 1,
wherein the one frame period of the first means is composed of three periods of a write-in
period, a display period, and an erasing period.

10. (Original) A display device according to claim 2,

wherein the one frame period of the first means is composed of three periods of a write-in period, a display period, and an erasing period.

11. (Original) A display device according to claim 1,

wherein the display controller operates at a lower voltage in the second means as compared to in the first means.

12. (Original) A display device according to claim 2,

wherein the display controller operates at a lower voltage in the second means as compared to in the first means.

13. (Currently Amended) A display device comprising:

a display including a source signal line driver circuit and a gate signal line driver circuit;

a display controller;

a first means for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second means [[not]] for dividing one frame period into a plurality of subframe periods, for setting one of lighting and non-lighting to each of the plurality of subframe periods the one frame period, and for expressing [[1-bits]] m-bit gradation (m is a natural number less than n) in accordance with a total lighting time during the one frame period, for having a longer frame period as compared to the one frame period for expressing n-bits gradation and for operating the display at a lower driving voltage than the first means,

wherein the display and the display controller are formed over a common substrate,

wherein the second means has a lower voltage for driving the source signal line driver circuit and the gate signal line driver circuit than the first means, and

wherein the first and second means are controlled by the display controller.

14. (Currently Amended) A display device according to claim 13,
wherein the display device further comprises a frame memory;
n-bits data (n is a natural number of two or more) is written and read out to perform a
display operation in the first means; and
[[1-bits]] m-bit data (m is a natural number less than n) is written and read out to perform
a display operation in the second means.

15. (Original) A display device according to claim 13,
wherein the display device further comprises a light emitting element for each pixel;
a specific voltage is applied to the light emitting element; and
a voltage applied to the light emitting element in the first means is higher than a voltage
applied to the light emitting element in the second means.

16. (Original) A display device according to claim 13,
wherein the display device further comprises a light emitting element for each pixel;
a specific current is supplied to the light emitting element; and
a current supplied to the light emitting element in the first means is larger than a current
supplied to the light emitting element in the second means.

17. (Original) A display device according to claim 13,
wherein the one frame period of the first means is composed of three periods of a write-in
period, a display period, and an erasing period.

18. (Canceled).

19. (Original) A display device according to claim 13,

wherein the display controller operates at a lower voltage in the second means as compared to in the first means.

20. (Currently Amended) A method of driving a display device having a display including a source signal line driver circuit and a gate signal line driver circuit and a display controller,

comprising:

a first display mode for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second display mode not for dividing one frame period into a plurality of subframe periods, for setting one of lighting and non-lighting to the one frame period, and for expressing 1-bit gradation in accordance with a total lighting time during the one frame period and for having a longer frame period than the first display mode,

wherein the display and the display controller are formed over a common substrate,

wherein the second display mode has a lower voltage for driving the source signal line driver circuit and the gate signal line driver circuit than the first display mode, and

wherein the first and second display modes are controlled by the display controller.

21. (Currently Amended) A method of driving a display device having a display including a source signal line driver circuit and a gate signal line driver circuit and a display controller, comprising:

a first display mode for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second display mode not for dividing one frame period into a plurality of subframe periods, for setting one of lighting and non-lighting to the one frame period, and for expressing 1-bit gradation in accordance with a total lighting time during the one frame period, ~~for having a longer frame period than the first display mode and for operating the display at a lower clock frequency than the first display mode,~~

wherein the display and the display controller are formed over a common substrate,
wherein the second mode has a longer frame period as compared to the one frame period
for expressing n-bits gradation,

wherein the second display mode has a lower voltage for driving the source signal line
driver circuit and the gate signal line driver circuit than the first display mode, and
wherein the first and second display modes are controlled by the display controller.

22. (Original) A method of driving a display device according to claim 20,
wherein the display device further comprises a frame memory;
n-bits data (n is a natural number of two or more) is written and read out to perform a display operation in the first display mode; and
1-bit data is written and read out to perform a display operation in the second display mode.

23. (Original) A method of driving a display device according to claim 21,
wherein the display device further comprises a frame memory;
n-bits data (n is a natural number of two or more) is written and read out to perform a display operation in the first display mode; and
1-bit data is written and read out to perform a display operation in the second display mode.

24. (Original) A method of driving a display device according to claim 20,
wherein the display device further comprises a light emitting element for each pixel;

a specific voltage is applied to the light emitting element; and
a voltage applied to the light emitting element in the first display mode is higher than a voltage applied to the light emitting element in the second display mode.

25. (Original) A method of driving a display device according to claim 21, wherein the display device further comprises a light emitting element for each pixel; a specific voltage is applied to the light emitting element; and a voltage applied to the light emitting element in the first display mode is higher than a voltage applied to the light emitting element in the second display mode.

26. (Original) A method of driving a display device according to claim 20, wherein the display device further comprises a light emitting element for each pixel; a specific current is supplied to the light emitting element; and a current supplied to the light emitting element in the first display mode is larger than a current supplied to the light emitting element in the second display mode.

27. (Original) A method of driving a display device according to claim 21, wherein the display device further comprises a light emitting element for each pixel; a specific current is supplied to the light emitting element; and a current supplied to the light emitting element in the first display mode is larger than a current supplied to the light emitting element in the second display mode.

28. (Original) A method of driving a display device according to claim 20, wherein the first display mode is composed of three periods of a write-in period, a display period, and an erasing period.

29. (Original) A method of driving a display device according to claim 21,

wherein the first display mode is composed of three periods of a write-in period, a display period, and an erasing period.

30. (Original) A method of driving a display device according to claim 20,
wherein the display controller operates at a lower voltage in the second display mode as compared to in the first display mode.

31. (Original) A method of driving a display device according to claim 21,
wherein the display controller operates at a lower voltage in the second display mode as compared to in the first display mode.

32. (Currently Amended) A method of driving a display device having a display including a source signal line driver circuit and a gate signal line driver circuit and a display controller, comprising:

a first display mode for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods, and for expressing n-bits gradation (n is a natural number of two or more) in accordance with a total lighting time during the one frame period; and

a second display mode [[not]] for dividing one frame period into a plurality of subframe periods and setting one of lighting and non-lighting to each of the plurality of subframe periods the one frame period, and for expressing [[1-bits]] m-bit gradation (m is a natural number less than n) in accordance with a total lighting time during the one frame period, for having a longer frame period than the first display mode and for operating the display at a lower driving voltage than the first display mode,

wherein the display and the display controller are formed over a common substrate,
wherein the second display mode has a lower voltage for driving the source signal line
driver circuit and the gate signal line driver circuit than the first display mode, and
wherein the first and second display modes are controlled by the display controller.

33. (Original) A method of driving a display device according to claim 32, wherein the display device further comprises a frame memory; n-bits data (n is a natural number of two or more) is written and read out to perform a display operation in the first display mode; and

1-bit data is written and read out to perform a display operation in the second display mode.

34. (Original) A method of driving a display device according to claim 32, wherein the display device further comprises a light emitting element for each pixel; a specific voltage is applied to the light emitting element; and a voltage applied to the light emitting element in the first display mode is higher than a voltage applied to the light emitting element in the second display mode.

35. (Original) A method of driving a display device according to claim 32, wherein the display device further comprises a light emitting element for each pixel; a specific current is supplied to the light emitting element; and a current supplied to the light emitting element in the first display mode is larger than a current supplied to the light emitting element in the second display mode.

36. (Original) A method of driving a display device according to claim 32, wherein the first display mode is composed of three periods of a write-in period, a display period, and an erasing period.

37. (Canceled).

38. (Original) A method of driving a display device according to claim 32,

wherein the display controller operates at a lower voltage in the second display mode as compared to in the first display mode.

39. (Original) A display device according to claim 1, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.

40. (Original) A display device according to claim 2, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.

41. (Original) A display device according to claim 13, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.

42. (Original) A method of driving a display device according to claim 20, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.

43. (Original) A method of driving a display device according to claim 21, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.

44. (Original) A method of driving a display device according to claim 32, wherein the display device is used in an electronic equipment selected from the group consisting of a portable information terminal, a personal computer, an image reproducing device, a television, a head mounted display and a video camera.